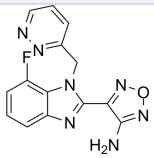
Product Datasheet

Physicochemical Properties

Product Name	CVN293
Cat No.	V86915
Molecular Formula	C14H10FN7O
Molecular Weight	311.27
CAS #	2815296-08-1
Appearance	Solid powder
HS Tariff Code	2934.99.9001
Storage	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month
Shipping Condition	Room temperature (This product is stable at ambient temperature for a few days during ordinary shipping and time spent in Customs)



Solubility Data

Solubility (In Vitro)	DMSO : 5 mg/mL (16.06 mM; with sonication (<60°C))
Solubility (In Vivo)	**Note:** Listed below are some common formulations that may be used to formulate products with low water solubility (e.g. < 1 mg/mL), you may test these formulations using a minute amount of products to avoid loss of samples. **Injection Formulations** **(e.g. IP/IV/IM/SC)** **Injection Formulation 1:** DMSO : Tween 80 Saline = 10 : 5 : 85 (i.e. **100 μL** DMSO stock solution → **50 μL** Tween 80 → **850 μL** Saline) *Preparation of saline: Dissolve 0.9 g of sodium chloride in 100 mL ddH 2 O to obtain a clear solution. **Injection Formulation 2:** DMSO : PEG300 Tween 80 : Saline = 10 : 40 : 5 : 45 (i.e. **100 μL** DMSO → **400 μL**PEG300 → **50 μL** Tween 80 → **450 μL** Saline) **Injection Formulation 3:** DMSO : Corn oil = 10 : 90 (i.e. **100 μL** DMSO → **900 μL** Corn oil) Example: Take the **Injection Formulation 3** (DMSO : Corn oil = 10 : 90) as an example, if **1 mL** of 2.5 mg/mL working solution is to be prepared, you can take **100 μL 25 mg/mL DMSO stock solution** and add to **900 μL corn oil**, mix well to obtain a clear or suspension solution (2.5 mg/mL, ready for use in animals). ▶ View More **Oral Formulations** **Oral Formulation 1:** Suspend in 0.5% CMC Na (carboxymethylcellulose sodium) **Oral Formulation 2:** Suspend in 0.5% Carboxymethyl cellulose Example: Take the **Oral Formulation 1** (Suspend in 0.5% CMC Na) as an example, if **100 mL** of 2.5 mg/mL working solution is to be prepared, you can first prepare 0.5% CMC Na solution by measuring **0.5 g CMC Na** and dissolve it in **100 mL ddH2O** to obtain a clear solution; then add 250 mg of the product to 100 mL 0.5% CMC Na solution, to make the suspension solution (2.5 mg/mL, ready for use in animals). ▶ View More **Note:** Please be aware that the above formulations are for reference only. InvivoChem

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	strongly recommends customers to read literature methods/protocols carefully before determining which formulation you should use for in vivo studies, as different compounds have different solubility properties and have to be formulated differently. (Please use freshly prepared in vivo formulations for optimal results.)

Preparing Stock Solutions	Solvent Volume / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2126 mL	16.0632 mL	32.1264 mL
	5 mM	0.6425 mL	3.2126 mL	6.4253 mL
	10 mM	0.3213 mL	1.6063 mL	3.2126 mL

***Note:** Please select an appropriate solvent for the preparation of stock solution based on your experiment needs. For most products, DMSO can be used for preparing stock solutions (e.g. 5 mM, 10 mM, or 20 mM concentration); some products with high aqueous solubility may be dissolved in water directly. Solubility information is available at the above Solubility Data section. Once the stock solution is prepared, aliquot it to routine usage volumes and store at -20°C or -80°C. Avoid repeated freeze and thaw cycles.

Biological Activity I Assay Protocols (From Reference)

Targets	hKCNK13 41 nM (IC50) mKCNK13 28 nM (IC50) hKCNK6 >30000 nM (IC50) hKCNK2 >30000 nM (IC50)
In Vitro	CVN293 (0.05, 0.5, 5 μM) has a concentration-dependent inhibitory effect on NLRP3 inflammasome-mediated LPS-induced IL-1β production in mouse microglia [1].
In vivo	Pharmacokinetic Parameters of CVN293 in male Sprague-Dawley rat, dog and cynomolgus monkey[1]. IV (0.5 mg/kg; rat) PO (3 mg/kg; rat) IV (1 mg/kg; dog) PO (10 mg /kg; dog) IV (1 mg/kg; cynomolgus monkey) PO (3 mg/kg; cynomolgus monkey) Tmax (h) 1.0 1.25 1.0 Cmax (ng/mL) 468 241 165 AUC0-∞ (ng·h/mL) 222 1236 438 630 782 546 t1/2 (h) 1.0 2.0 0.5 2.6 1.1 1.9 CLp (mL/min/kg) 35 38 22 Vss (L/kg) 1.85 1.42 1.45 F (%) 87 41 24
References	[1]. Discovery of CVN293, a Brain Permeable KCNK13 (THIK-1) Inhibitor Suitable for Clinical Assessment. ACS Med. Chem. Lett. 2024.

These protocols are for reference only. InvivoChem does not independently validate these methods.

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